

Advanced Intelligent Network

Purpose: The Advanced Intelligent Network (AIN) is an evolving service-independent architecture within the Public Network (PN). Through the use of peripheral computers and data processing systems, AIN provides technical and cost advantages to telecommunications service providers, enabling them to quickly and economically create, test, deploy, and modify enhanced services. PN carriers are becoming increasingly dependent on AIN capabilities to deliver services to their customers. Carriers are using AIN to deploy local number portability (LNP), as mandated by the Federal Communications Commission (FCC), to open networks to competitive service providers, and to meet customer demand for new service capabilities (e.g., mobility, data, Internet access). Because AIN has become a vital component of the PN, the Office of the Manager, National Communications System (OMNCS) must determine its reliability and availability to support national security and emergency preparedness (NS/EP) communications.

Background: The President's National Security Telecommunications Advisory Committee (NSTAC) and the OMNCS identified the AIN as having the potential to provide access control, priority treatment, user authentication, and other survivability features supporting NS/EP telecommunications. The OMNCS established the AIN Program in 1990 to address the emerging technology and an associated AIN Program Office to plan, coordinate, and oversee the effort. The AIN Program is responsible for the research and development of AIN-based technology applications for NS/EP and operates under the following mission objectives:

- ☐ Assess AIN architectures, standards, and implementations
- ☐ Define, develop, and demonstrate AIN NS/EP applications
- ☐ Ensure NS/EP requirements influence the evolving AIN technology
- ☐ Facilitate integration into Government initiatives—e.g., Government Emergency Telecommunications Service (GETS), Defense Information System Network (DISN)
- ☐ Evaluate AIN security, survivability, reliability, and interoperability.

Highlights:

- ☐ Architecture consists of signaling systems, switches, computer processors, databases, and transmission media.
- ☐ AIN allows customized network services that can be flexibly, rapidly, and cost-effectively configured to meet changing customer needs.
- ☐ AIN provides priority recognition, user authentication, enhanced routing, and network management alternatives in support of NS/EP contingency operations.
- ☐ Specific AIN Program activities include—
 - Deploying AIN-based alternate carrier routing to support local exchange carrier (LEC) enhanced routing
 - Monitoring FCC rulemakings that may affect AIN availability and participating in industry forums to communicate NS/EP needs
 - Assessing the impact of LNP on NS/EP telecommunications and the GETS Program
 - Evaluating common channel signaling evolution and the emerging wireless intelligent network
 - Assessing the capability of traditional intelligent networks to support emerging multimedia network services.

Contact Information: Additional information may be obtained by contacting the AIN Program Office.

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